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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/656,893	09/04/2003	Troy Simmons	43789-268902	1534
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ALSTON & BIRD LLP BANK OF AMERICA PLAZA 101 SOUTH TRYON STREET, SUITE 4000 CHARLOTTE, NC 28280-4000			EXAMINER DANIELS, MATTHEW J	
			ART UNIT	PAPER NUMBER
			1732	

DATE MAILED: 07/13/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/656,893

Applicant(s)

SIMMONS ET AL.

Examiner

Matthew J. Daniels

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 April 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 13 and 15-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 13 and 15-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. In the reply filed 24 April 2006, Claims 13, 15, and 16 were amended. Claims 12 and 14 were cancelled and new Claims 17 and 18 were presented.

Specification

2. The objection to the abstract is withdrawn.

Claim Rejections - 35 USC § 112

3. Rejections set forth previously under this section are withdrawn in view of the amendments or arguments presented in response on pages 7 and 8 of the remarks/arguments.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. **Claim 13** is rejected under 35 U.S.C. 103(a) as being unpatentable over Wotherspoon (USPN 3349534) in view of Grundy (USPN 2120742), Rotter (USPN 5326318), and Chaffee (USPN 1993086). **As to Claim 13**, Wotherspoon provides a roof structure by use of a first tile shape and a second tile shape (multiple tiles are produced) both having a generally "S"-shaped transverse cross section (Fig. 4) and including a cap portion (Fig. 4, Item 18) which defines a

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concave surface relative to a supporting surface (implicit in that one face of the “S” shape must be facing down), and installing the first tile shape atop a supporting structure would have been prima facie obvious as being the intended use of the product of Wotherspoon.

Wotherspoon appears to be silent to a) a tile mold, b) the second tile shape defining a first breakage channel and a second breakage channel on one or more surfaces of the second shape, the first breakage channel configured to facilitate breakage of the second tile shape between the cap portion and the pan portion, and the second breakage channel configured to facilitate breakage of the cap portion into two sections wherein each of the two cap portions and the pan section have a generally “C”-shaped transverse cross section, c) breaking the second tile shape along the first breakage channel and breaking the cap portion along the second breakage channel, d) attaching one of the two cap portion sections of the second tile shape atop the cap portion of the first tile shape.

However, Grundy, Rotter, and Chaffee teach the following:

a) Chaffee teaches a tile mold for providing a first or second tile shape (Page 2, column 1, lines 25-55).

b and c) Grundy teaches tiles produced with lengthwise grooves for breaking a clay element into three different slabs (Page 1, right column, lines 37-45) and transverse grooves for breaking each slab into smaller pieces when it is desired to form smaller tiles (Fig. 1, Item 4 and Page 1, right column, lines 37-45). Breaking tiles having cleavage lines to facilitate this purpose would have been prima facie obvious. Additionally, Rotter shows that “C” shaped sections can be used either facing up or down, and therefore placing the breakage channel between the cap portion and the pan portion would have been obvious.

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d) Rotter teaches that it is known to place a first tile shape atop a supporting structure (Fig. 1, Item 18) and either attaching a shorter mission shaped tile having a generally “C”-shaped transverse cross section atop the cap portion of the first tile shape (Fig. 1, Item 30) or attaching a cap portion onto the cap portion of another tile (multiple rows of tiles are shown in Fig. 1).

It would have been prima facie obvious to one of ordinary skill in the art at the time of the invention to incorporate the methods of Chaffee, Grundy, and Rotter into that of Wotherspoon in order to provide a shingle that simulates expensive tiles (Chaffee, Page 2, left column, lines 44-47), provide extra cleavage lines when it is desired to form smaller tiles (Grundy, Page 1, right column, lines 37-45), and to provide a capping element to cover the slot between two top rows or tiles on each side of the roof thereby deflecting rain down the slope of the roof and keeping out dirt, and pests (5:1-21). As to **Claim 17**, Grundy teaches that cleavage channels may be placed at the desire of the artisan (page 1, right column, lines 42-45) and Rotter teaches that it is known to attach a cap portions onto the cap portions of other tiles (Fig. 1, Items 30 and 18).

5. **Claim 15** is rejected under 35 U.S.C. 103(a) as being unpatentable over Wotherspoon (USPN 3349534) in view of Grundy (USPN 2120742), Chaffee (USPN 1993086), and Fifield (USPJN 5743059). As to **Claim 15**, Wotherspoon provides a first or second tile shape, each being a generally “S”-tile shape having a “cap” portion and a “pan” portion (Fig. 4).

Wotherspoon is silent to the other claimed limitations, namely a) a tile mold, b) a separation channel and breaking along the separation channel, and c) a first and second tile shape.

However, Grundy, Chaffee, and Fifield teach the following:

- a) Chaffee teaches a tile mold for providing a first tile shape (Page 2, column 1, lines 25-55).
- b) Grundy teaches tiles produced with lengthwise grooves, which are interpreted to be separation channels, for breaking a clay element into three different slabs (Page 1, right column, lines 37-45).
- c) Fifield teaches that multiple shapes of slippers (5:23-30, Figs. 6a-6f, and 1:51-65) are known and interchangeable for shaping the top surface of the tiles (Abstract) without changing the bottom surface.

In the combined method, it would have been obvious over Fifield's method to provide multiple slipper shapes to provide a desired tile appearance or functionality. It would have been further obvious over Grundy's method to provide slippers with lengthwise grooves to provide separation channels when it is desired to form smaller tiles (in length or in width), such as at the end of a roof when half of Wotherspoon's tile overhangs the edge of the roof. Chaffee further teaches that shaping of tiles with a mold is known and obvious in the art. Breakage of Wotherspoon's tile would provide a "cap" shape and a "pan" shape.

It would have been prima facie obvious to one of ordinary skill in the art at the time of the invention to incorporate the methods of Chaffee, Grundy, and Fifield into that of Wotherspoon to provide a shingle that simulates expensive tiles (Chaffee, Page 2, left column, lines 44-47), to provide extra cleavage lines when it is desired to form smaller tiles (Grundy, Page 1, right column, lines 37-45) at the edge of a roof, and to change the contoured appearance of the upper surface of tiles without changing the under surface of the tiles (Fifield, Abstract, last four lines) to provide particular aesthetic or functional characteristics (Fifield, columns 5-6).

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6. **Claim 16** is rejected under 35 U.S.C. 103(a) as being unpatentable over Wotherspoon (USPN 3349534) in view of Chaffee (USPN 1993086) and Fifield (USPJN 5743059). As to **Claim 16**, Wotherspoon provides a first or second tile shape (which are the same), each being an “S”-tile shape (Fig. 4) having a simulation interface channel (Fig. 4, Item 25) such that the S-tile shape simulates two mission-shaped tiles each having a generally “C”-shaped transverse cross section (2:54-58). Wotherspoon is silent to the claimed limitation drawn to first and second slippers and to a tile mold. However, Chaffee and Fifield teach the following:

- a) Chaffee teaches a tile mold for providing a first tile shape (Page 2, column 1, lines 25-55).
- b) Fifield teaches that multiple shapes of slippers (5:23-30, Figs. 6a-6f, and 1:51-65) are known and interchangeable for shaping the top surface of the tiles (Abstract) without changing the bottom surface.

It would have been prima facie obvious to one of ordinary skill in the art at the time of the invention to incorporate the methods of Chaffee and Fifield into that of Wotherspoon to provide a shingle that simulates expensive tiles (Chaffee, Page 2, left column, lines 44-47), and to change the contoured appearance of the upper surface of tiles without changing the under surface of the tiles (Fifield, Abstract, last four lines) to provide particular aesthetic or functional characteristics (Fifield, columns 5-6).

7. As to **Claim 18**, Wotherspoon provides a first or second tile shape, each being a generally “S”-tile shape having a “cap” portion and a “pan” portion (Fig. 4), the cap portion defining a concave surface relative to a supporting surface and the pan portion defining a convex surface relative to the supporting structure, each having a “C”-shaped transverse cross section,

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and installing the first tile shape atop a supporting structure would have been implicit in that this is the intended use of Wotherspoon's article. Wotherspoon appears to be silent to the other claimed limitations, namely a) a first tile mold, b) the second tile shape defines at least one breakage channel on one or more surfaces of the second tile shape, wherein the at least one breakage channel is configured to facilitate breakage of the second tile shape between the cap portion and the pan portion, c) breaking the second tile along the breakage channel, and d) attaching the cap portion of the second tile atop the cap portion of the first tile shape.

However, Grundy, Rotter, and Chaffee teach the following:

a) Chaffee teaches a tile mold for providing a first tile shape (Page 2, column 1, lines 25-55).

b and c) Grundy teaches breakage channels on one or more surfaces which facilitate breakage.

Rotter teaches that "C" shapes are desirable (Fig. 2), and thus it would have been obvious to provide breakage channels between Wotherspoon's cap and pan portions, and to break it at that location.

d) Rotter teaches that it is known to place a first tile shape atop a supporting structure (Fig. 1, Item 18) and either attaching a shorter mission shaped tile having a generally "C"-shaped transverse cross section atop the cap portion of the first tile shape (Fig. 1, Item 30) or attaching a cap portion onto the cap portion of another tile (multiple rows of tiles are shown in Fig. 1).

It would have been prima facie obvious to one of ordinary skill in the art at the time of the invention to incorporate the methods of Chaffee, Grundy, and Rotter into that of Wotherspoon in order to provide a shingle that simulates expensive tiles (Chaffee, Page 2, left column, lines 44-47), provide extra cleavage lines when it is desired to form smaller tiles (Grundy, Page 1, right column, lines 37-45), and to provide a capping element to cover the slot

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between two top rows or tiles on each side of the roof thereby deflecting rain down the slope of the roof and keeping out dirt, and pests (5:1-21).

Response to Arguments

8. Applicant's arguments filed 24 April 2006 have been fully considered but they are not persuasive. The arguments appear to be on the following grounds:

a) The prior art fails to disclose two steps in amended Claim 13, namely the breaking the second tile along the first breakage channel and breaking the second tile shape along the second breakage channel.

b) The prior art fails to disclose two steps in amended Claim 15, namely providing a second tile shape by use of the tile mold used to provide a first tile shape and a second slipper wherein the tile shape is an S-tile and defining a separation channel and breaking the tile shape such that one S-tile is converted into cap and pan tiles.

c) The prior art fails to disclose two steps in amended Claim 16, namely providing a second tile shape by use of a second slipper and the second tile provides a simulation interface channel such that the second tile shape simulates tile shapes having a C-shaped cross section.

d) Additional arguments are presented for new Claims 17 and 18

9. These arguments are not persuasive for the following reasons:

a) It is known in the art that both "S"-shaped tiles and "C" shaped tiles are desirable in the art.

See Wotherspoon (Fig. 1) and Rotter (Fig. 2), for example. Grundy teaches that it is known to cut cleavage lines in an article prior to hardening to produce smaller articles or facilitate

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trimming, and suggests to the ordinary artisan extra cleavage lines when it is desired to form smaller tiles. It is asserted that it would have been obvious to place cleavage lines between the cap and pan portions of Wotherspoon's "S"-shaped tiles in order to provide the "C"-shaped tiles of Rotter, or to provide extra cleavage lines in order to provide the ability to provide smaller tiles. Breaking tiles along cleavage lines placed for this particular purpose would have been prima facie obvious.

b) It is noted that no particular definition of "slipper" appears to be present in the application, and the Examiner's position is that Grundy must have used slippers to cut the cleavage lines in the same way claimed herein. Both "S"-shaped tiles and "C"-shaped tiles are known and conventional in the art, and it is asserted that it would have been obvious to place cleavage lines between the cap and pan portions of Wotherspoon's "S"-shaped tiles in order to provide "C"-shaped tiles, or to provide extra cleavage lines in order to provide the ability to provide smaller tiles.

c) The Examiner's asserts that the particular article configuration does not change or materially affect the claimed method. Cleavage lines would implicitly simulate the appearance of multiple tiles, and it is asserted that motivation exists to provide cleavage lines in the method of Wotherspoon. The apparatus that forms the cleavage lines of Grundy is interpreted to be a slipper.

d) The new claims are believed to be addressed by the new claim rejections above.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Matthew J. Daniels whose telephone number is (571) 272-2450. The examiner can normally be reached on Monday - Friday, 8:00 am - 5:30 pm.

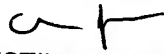
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christina Johnson can be reached on (571) 272-1176. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

MJD 7/9/06

MJD


CHRISTINA JOHNSON
PRIMARY EXAMINER

7/10/06